

Title: JP2000280748A2: DOOR WEATHER STRIP

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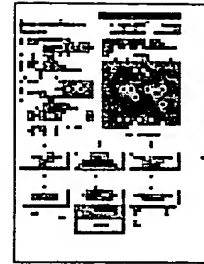
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Abstract: PROBLEM TO BE SOLVED: To provide an inexpensive and lightweight door weather strip while securing good sealing performance.

SOLUTION: A PP-made insert member 27 is arranged on the inner side surface 26 side of a die molding part 16 of a door weather strip, the outer front surface 27a of the insert member 27 is mostly covered with TPO. An inner seal part 32 formed of a triangular sectional projection streak made of TPO is formed on the inner front surface 27c of the insert member 21. A groove 34 is formed on a part corresponding to the inner side seal part 32 on the inner front surface 27c of the insert member 27, and the inner seal part 32 is reliably formed in die molding.

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Family:

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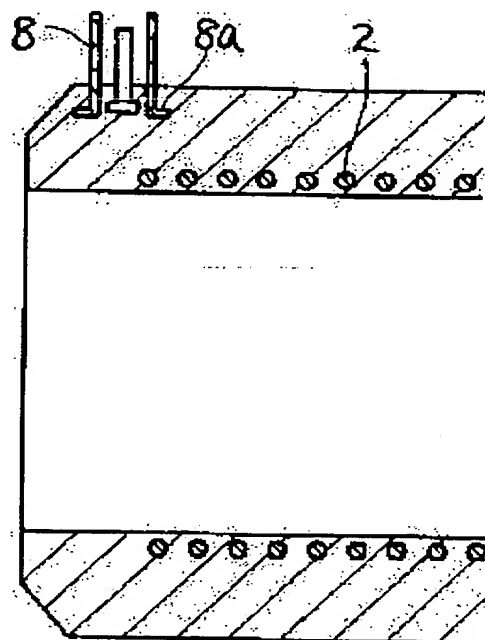
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(54) ELECTROFUSION JOINT

(57) Abstract:

PROBLEM TO BE SOLVED: To prevent the interruption of a work during the execution or defective bonding during the energization by forming a connector of a metal, a plastic, etc., and keeping its strength to be higher than that of a joint body.

SOLUTION: An electrofusion joint is insert-molded with a metallic connector 8 having a flange 8a. Another joint is insert-molded with a metallic connector around a terminal pin. Since the strength of the connector is high, the connector is difficult to break even when an impact is applied during the execution or during the transport of the joint, and the terminal pin is also less damaged. The connector is generally insert-molded, or alternatively, an insertion hole is formed in the joint, the connector is inserted therein, and adhered thereto using an adhesive, or the metallic connector is heated and pressed into the joint, and a resin in contact with the connector is melted for bonding.



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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[The technical field to which invention belongs] This invention relates to the electrofusion joint used in the piping work of plastic tubing.

[0002]

[Description of the Prior Art] Drawing 1 shows an example of this kind of electrofusion joint, lays heating wire 2 under the plane of composition with plastic tubing 1 at a coiled form, has become both sides from the mold goods which have the terminal pin 3 connected with heating wire 2, and the connector 4 surrounding the surroundings of it, and after connecting to a connector energization opening connected with the electric welding equipment which carried out the illustration abbreviation of the welding cementation to plastic tubing 1 at a push in and the terminal pin 3, it performs by carrying out duration energization. According to this joint, there is an advantage which can be performed easily [welding cementation in a pipe] and certainly.

[0003]

[Problem(s) to be Solved by the Invention] Although an electrofusion joint demonstrates the engine performance which was excellent in workability or earthquake resistance for the product made of resin, failure of the connector which protrudes from the main part of a joint was seen frequently. Even if it is generated by the impact added to a connector at the time of execution in a site, or joint transportation, and it stops used the joint by failure of a connector, and this could not but interrupt the activity and did not result even in failure of a connector, by the above-mentioned impact, the damage was given to the terminal pin and it might start poor welding at the time of energization.

[0004] This invention aims at offering the electrofusion joint which can solve the above-mentioned problem.

[0005]

[Means for Solving the Problem] Heating wire with which invention according to claim 1 is laid under the plane of composition with plastic tubing, It has a connector surrounding a terminal pin and this pin which are connected with heating wire. In an electrofusion joint performed by inserting in a connector energization opening connected with electric welding equipment in welding cementation to plastic tubing, and carrying out duration energization It does not combine, forms with composite material and is characterized by thing with plastics used with engineering plastics, or these and a joint in the above-mentioned connector for which reinforcement was made higher than a main part of a joint. [a metal, or]

[0006] According to this invention, since reinforcement of a connector is high, even if an impact is added at the time of execution and joint transportation, failure of a connector of a damage of **** and a terminal pin decreases to be generated. Although insert molding is usually carried out, after a connector of this invention forms a push-in hole in other methods, for example, a joint, and inserts a connector in it, it can paste up using adhesives, or it can heat a metal connector, can stuff it into a joint, and can also be welded by fusing resin in contact with a connector.

[0007] Invention according to claim 2 is characterized by having escaped into a portion laid under the joint of a connector lower limit, and protruding a projected part, for example, a flange, a pawl, etc. for a stop in invention according to claim 1. Insert molding of the connector is carried out in this invention.

[0008]

[Embodiment of the Invention] The electrofusion joint which the electrofusion joint shown in drawing 2 makes metal the surrounding connector 6 of the terminal pin 3, comes to carry out insert molding, and is shown in drawing 3 comes to carry out insert molding of the connector 8 as metal which has flange 8a.

[0009] The connector 10 shown in drawing 4 has metal part 10a of a circle cross section, and structure which combined resin partial 10b by turns.

[0010]

[Effect of the Invention] According to invention according to claim 1, a connector is damaged at the time of

execution and joint transportation, or that a terminal pin receives a damage decreases, consequently an activity is interrupted at the time of execution, or starting poor welding at the time of energization decreases, and the problem of it becoming impossible to use a joint can be solved.

[0011] A connector is fixed firmly and dedropping becomes is not less according to invention according to claim 2.

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] The cross section of the conventional electrofusion joint.

[Drawing 2] The important section cross section of the electrofusion joint concerning this invention.

[Drawing 3] The important section cross section of another example of the electrofusion joint concerning this invention.

[Drawing 4] The plan of another example of the electrofusion joint in which the connector was shown in the cross section.

[Description of Notations]

1 .. Plastic tubing 2 .. Heating wire

3 .. Terminal pin 4, 6, 8, 10 .. Connector

8a .. Flange 10a .. Metal part

10b .. Resin portion

[Translation done.]

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CLAIMS

[Claim(s)]

[Claim 1] An electrofusion joint characterized by forming the above-mentioned connector with a material with reinforcement higher than a main part of a joint in an electrofusion joint performed by inserting in a connector energization opening which has heating wire laid under the plane of composition with plastic tubing, and a connector surrounding a terminal pin and this pin which are connected with heating wire, and is connected with electric welding equipment in welding cementation to plastic tubing, and carrying out duration energization.

[Claim 2] An electrofusion joint according to claim 1 characterized by having escaped into a portion laid under the joint of a connector lower limit, and protruding a projected part for a stop.

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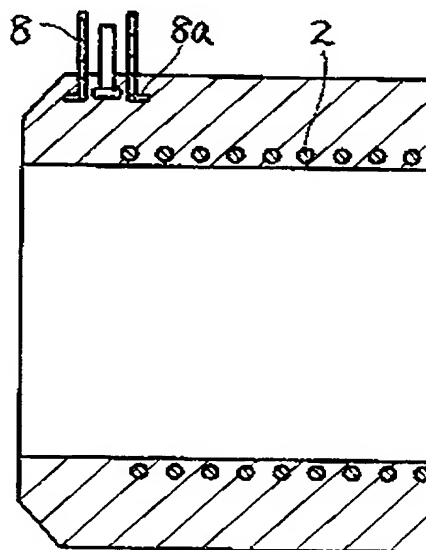
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(54) 【発明の名称】 エレクトロフュージョン継手

(57) 【要約】

【課題】施工時や継手輸送時にコネクタが破損したり、ターミナルピンにダメージを与えることを少なくし、施工時に作業を中断したり、通電時に融着不良を起こすことを少なくし、継手が使用できなくなる、といった問題を解消する。

【解決手段】ターミナルピン3の周りのコネクタ8を金属製とし、インサート成形する。そして抜け止めのためコネクタ8の下端にフランジ部8aを設ける。



(2)

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【特許請求の範囲】

【請求項1】 プラスチック管との接合面に埋設される電気線と、電気線に繋がるターミナルピン及び該ピンを囲むコネクタを有し、プラスチック管との融着接合を電気融着装置に繋がる通電口をコネクタに差込んで所要時間通電することによって行うエレクトロフュージョン継手において、上記コネクタを継手本体より強度の高い材料で形成したことを特徴とするエレクトロフュージョン継手。

【請求項2】 コネクタ下端の継手に埋設される部分に抜け止めのための突部を突設したことを特徴とする請求項1記載のエレクトロフュージョン継手。

【発明の詳細な説明】

【0001】

【発明が属する技術分野】 本発明は、プラスチック管の配管工事において用いられるエレクトロフュージョン継手に関する。

【0002】

【従来技術】 図1は、この種のエレクトロフュージョン継手の一例を示すもので、プラスチック管1との接合面に電気線2をコイル状に埋設し、両側に電気線2に繋がるターミナルピン3と、その周りを囲むコネクタ4を有する成形品よりなっており、プラスチック管1との融着接合を図示省略した電気融着装置に繋がる通電口をコネクタに差込み、ターミナルピン3に接続したのち、所要時間通電することによって行うようになっている。この継手によれば、管との融着接合が容易かつ確実に行える利点がある。

【0003】

【発明が解決しようとする課題】 エレクトロフュージョン継手は、樹脂製のため施工性や耐震性に優れた性能を発揮するが、継手本体より突設されるコネクタの破損が度々見られてきた。これは、現場での施工時又は継手輸送時にコネクタに加えられる衝撃等によって生ずるもので、コネクタの破損によって継手が使用できなくなったり、作業を中断せざるを得なかったりし、またコネクタの破損にまで至らなくても、上記衝撃によってターミナルピンにダメージが与えられ、通電時に融着不良を起こすことがあった。

【0004】 本発明は、上記の問題を解消することができ、エレクトロフュージョン継手を提供することを目的とする。

【0005】

【課題の解決手段】 請求項1記載の発明は、プラスチック管との接合面に埋設される電気線と、電気線に繋がるターミナルピン及び該ピンを囲むコネクタを有し、プラスチック管との融着接合を電気融着装置に繋がる通電口をコネクタに差込んで所要時間通電することによって行うエレクトロフュージョン継手において、上記コネクタを例えば金属やエンジニアリングプラスチック或

いはこれらと継手で用いられるプラスチックとの組み合わせない複合材料により形成し、継手本体より強度を高くしたことを特徴とする。

【0006】 本発明によると、コネクタの強度が高いため施工時や継手輸送時に衝撃が加わってもコネクタの破損が生じにくく、またターミナルピンのダメージも少なくなる。本発明のコネクタは通常、インサート成形されるが、他の方法、例えば継手に差込み孔を形成してコネクタを差込んだのち接着剤を用いて接着するか、或いは金属製のコネクタを加熱して継手に押込み、コネクタに接触する樹脂を溶融することにより融着することもできる。

【0007】 請求項2記載の発明は、請求項1記載の発明において、コネクタ下端の継手に埋設される部分に抜け止めのための突部、例えばフランジや爪等を突設したことを特徴とする。本発明において、コネクタはインサート成形される。

【0008】

【発明の実施の形態】 図2に示すエレクトロフュージョン継手は、ターミナルピン3の周りのコネクタ6を金属製としてインサート成形してなるものであり、図3に示すエレクトロフュージョン継手は、コネクタ8をフランジ部8aを有する金属製としてインサート成形してなるものである。

【0009】 図4に示すコネクタ10は、円弧断面の金属部分10aと、樹脂部分10bを交互に組合せた構造となっている。

【0010】

【発明の効果】 請求項1記載の発明によれば、施工時や継手輸送時にコネクタが破損したり、ターミナルピンがダメージを受けることが少なくなり、その結果、施工時に作業を中断したり、通電時に融着不良を起こすことが少なくなり、継手が使用できなくなる、といった問題を解消することができる。

【0011】 請求項2記載の発明によれば、コネクタがしっかりと固定され、脱落しなくなる。

【図面の簡単な説明】

【図1】 従来のエレクトロフュージョン継手の断面図。

【図2】 本発明に係るエレクトロフュージョン継手の要部断面図。

【図3】 本発明に係るエレクトロフュージョン継手の別の例の要部断面図。

【図4】 コネクタを断面で示したエレクトロフュージョン継手の別の例の平面図。

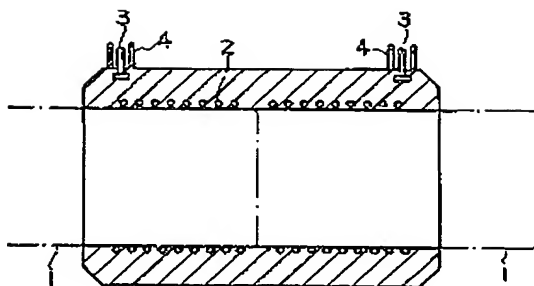
【符号の説明】

1・・・プラスチック管 2・・・電気線
3・・・ターミナルピン 4、6、8、10・・・コネクタ
8a・・・フランジ部 10a・・・金属部分
10b・・・樹脂部分

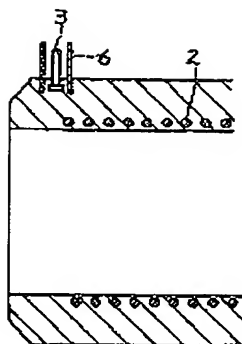
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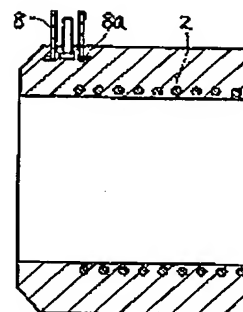
【図1】



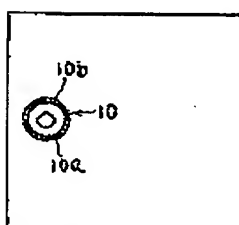
【図2】



【図3】



【図4】



フロントページの続き

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